
Subject: Re: converting a string to an IDL command
Posted by [David Fanning](#) on Mon, 08 Sep 2008 16:51:01 GMT
[View Forum Message](#) <> [Reply to Message](#)

Mark writes:

```
> I find myself constantly doing things like:
>
> print, '  min(x), max(x)  ',min(x),max(x)
>
> Is is possible to do something along the lines of:
>
> char=' min(x),max(x) '
> some_function,char
>
> where some_function would change char into one line of IDL code? That
> is, if x=findgen(10)
> sub_function would print something like:
>
> min(x),max(x) ,0.000 ,9.000
>
> Seems like this wouldn't be so hard. I'm interested in something that
> would work with Unix.
```

I think it might take all of 10 seconds to write your own MINMAX routine in IDL that did exactly what you have in mind. Then, you could do it all in **one** line! :-)

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: converting a string to an IDL command
Posted by [Jean H.](#) on Mon, 08 Sep 2008 16:56:31 GMT
[View Forum Message](#) <> [Reply to Message](#)

Mark wrote:

```
> Hello!
>
> I find myself constantly doing things like:
>
```

> print,' min(x), max(x) ',min(x),max(x)
>
> Is is possible to do something along the lines of:
>
> char=' min(x),max(x) '
> some_function,char
>
> where some_function would change char into one line of IDL code? That
> is, if x=findgen(10)
> sub_function would print something like:
>
> min(x),max(x) ,0.000 ,9.000
>
> Seems like this wouldn't be so hard. I'm interested in something that
> would work with Unix.
> Thanks,
>
> Mark

Execute comes to mind... but you would have to pass both the command string and the x array.
Otherwise, do a printMinMax,x procedure that prints and do exactly what you want!

Jean

Subject: Re: converting a string to an IDL command
Posted by [pgrigis](#) on Mon, 08 Sep 2008 17:14:37 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hi David,

lots of posts today, did you give up your new job already?
Not that anybody here would complain about that ... ;-)

Ciao,
Paolo

David Fanning wrote:

> Mark writes:
>
>> I find myself constantly doing things like:
>>
>> print,' min(x), max(x) ',min(x),max(x)
>>
>> Is is possible to do something along the lines of:
>>

```
>> char=' min(x),max(x) '
>> some_function,char
>>
>> where some_function would change char into one line of IDL code? That
>> is, if x=findgen(10)
>> sub_function would print something like:
>>
>> min(x),max(x) ,0.000 ,9.000
>>
>> Seems like this wouldn't be so hard. I'm interested in something that
>> would work with Unix.
>
> I think it might take all of 10 seconds to write your
> own MINMAX routine in IDL that did exactly what you have
> in mind. Then, you could do it all in *one* line! :-)
>
> Cheers,
>
> David
>
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming: http://www.dfanning.com/
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")
```

Subject: Re: converting a string to an IDL command
Posted by [David Fanning](#) on Mon, 08 Sep 2008 17:16:11 GMT
[View Forum Message](#) <> [Reply to Message](#)

pgrigis@gmail.com writes:

```
> lots of posts today, did you give up your new job already?
> Not that anybody here would complain about that ... ;-)
```

No, no. Car troubles. Stuck at home where old habits
die hard. :-)

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: converting a string to an IDL command
Posted by [Bob\[3\]](#) on Mon, 08 Sep 2008 17:30:35 GMT
[View Forum Message](#) <> [Reply to Message](#)

On Sep 8, 12:46 pm, Mark <astrobo...@gmail.com> wrote:

```
> Hello!
>
> I find myself constantly doing things like:
>
> print, '  min(x), max(x)  ',min(x),max(x)
>
> Is is possible to do something along the lines of:
>
> char=' min(x),max(x) '
> some_function,char
>
> where some_function would change char into one line of IDL code? That
> is, if x=findgen(10)
> sub_function would print something like:
>
> min(x),max(x) ,0.000 ,9.000
>
> Seems like this wouldn't be so hard. I'm interested in something that
> would work with Unix.
> Thanks,
>
> Mark
```

```
result=execute('print,"'+char+'",'+char)
```

Subject: Re: converting a string to an IDL command
Posted by [astroboy2k](#) on Mon, 08 Sep 2008 18:57:34 GMT
[View Forum Message](#) <> [Reply to Message](#)

On Sep 8, 1:30 pm, Bob Crawford <Snowma...@gmail.com> wrote:

```
> On Sep 8, 12:46 pm, Mark <astrobo...@gmail.com> wrote:
>
>
>
>> Hello!
>
>> I find myself constantly doing things like:
>
>> print, '  min(x), max(x)  ',min(x),max(x)
>
>> Is is possible to do something along the lines of:
>
```

```
>> char=' min(x),max(x) '  
>> some_function,char  
>  
>> where some_function would change char into one line of IDL code? That  
>> is, if x=findgen(10)  
>> sub_function would print something like:  
>  
>> min(x),max(x) ,0.000 ,9.000  
>  
>> Seems like this wouldn't be so hard. I'm interested in something that  
>> would work with Unix.  
>> Thanks,  
>  
>> Mark  
>  
> result=execute('print,"'+char+'",'+char)
```

Thanks Bob,

This is just what I need. Unfortunately, I have never worked anywhere where anyone knows more IDL than I do, and despite all the unselfish help from this group and David's excellent book and website, alot of times there are pretty basic things which simply flew under the radar along the way... :(

Subject: Re: converting a string to an IDL command
Posted by [astroboy2k](#) on Mon, 08 Sep 2008 19:13:01 GMT
[View Forum Message](#) <> [Reply to Message](#)

Actually, I have a related question, for which if it's obvious I apologize in advance.

Not sure how to put this precisely, but....

Let's say I have an array called "happydays".

I'd like to make a function that would take the string 'happydays', and say, return the min and max of the array with that name:

```
out=some_function('happydays')  
where out is the string:
```

'The max and min of HAPPYDAYS is 0 and 15"

Just as well, would be something like:

out=some_function(happydays)
and out is the same string as above.

In other words, I guess what I'm asking is, is there a way to find the original name of a variable that was passed to a sub-program or a function....

Thanks in advance,

Mark

Subject: Re: converting a string to an IDL command
Posted by [Michael Galloy](#) on Mon, 08 Sep 2008 19:25:19 GMT
[View Forum Message](#) <> [Reply to Message](#)

On Sep 8, 1:13 pm, Mark <astrobo...@gmail.com> wrote:
> Actually, I have a related question, for which if it's obvious I
> apologize in advance.
>
> Not sure how to put this precisely, but....
>
> Let's say I have an array called "happydays".
>
> I'd like to make a function that would take the string 'happydays',
> and say, return the min and max of the array with that name:
>
> out=some_function('happydays')
> where out is the string:
>
> 'The max and min of HAPPYDAYS is 0 and 15'

How about:

```
pro mg_printvar, name
  compile_opt strictarr

  var = scope_varfetch(name, level=-1L)
  varMin = min(var, max=varMax)
  print, 'The range of ' + strupcase(name) + ' is ' + strtrim(varMin,
2) + ' to ' + strtrim(varMax, 2)
end
```

This works like:

```
IDL> a = randomu(seed, 10)
IDL> mg_printvar, 'a'
The range of A is 0.0932334 to 0.960451
```

> Just as well, would be something like:
>
> out=some_function(happydays)
> and out is the same string as above.
>
> In other words, I guess what I'm asking is, is there a way to find
> the original name of a variable that was passed to a sub-program or a
> function....

This one uses SCOPE_VARNAME to do the dirty work:

```
pro mg_printvar2, var  
  compile_opt strictarr  
  
  name = scope_varname(var, level=-1L)  
  varMin = min(var, max=varMax)  
  print, 'The range of ' + strupcase(name) + ' is ' + strtrim(varMin,  
2) + ' to ' + strtrim(varMax, 2)  
end
```

For example:

```
IDL> mg_printvar2, a  
The range of A is 0.0932334 to 0.960451
```

Mike

--

www.michaelgalloy.com

Tech-X Corporation

Software Developer II

Subject: Re: converting a string to an IDL command
Posted by [Jean H.](#) on Mon, 08 Sep 2008 19:26:51 GMT
[View Forum Message](#) <> [Reply to Message](#)

> In other words, I guess what I'm asking is, is there a way to find
> the original name of a variable that was passed to a sub-program or a
> function....
>
> Thanks in advance,
>
> Mark

yes, see "SCOPE_VARNAME" in the help

Jean

Mark writes:

> Actually, I have a related question, for which if it's obvious I
> apologize in advance.
>
> Not sure how to put this precisely, but....
>
> Let's say I have an array called "happydays".
>
> I'd like to make a function that would take the string 'happydays',
> and say, return the min and max of the array with that name:
>
> out=some_function('happydays')
> where out is the string:
>
> 'The max and min of HAPPYDAYS is 0 and 15"
>
>
> Just as well, would be something like:
>
> out=some_function(happydays)
> and out is the same string as above.
>
> In other words, I guess what I'm asking is, is there a way to find
> the original name of a variable that was passed to a sub-program or a
> function....

Now you are going down a really slippery slope. Better be careful!

Think about it. You are inside of SOME_FUNCTION and you need to know something about a variable array named "happydays". Where is this array? Not inside the function where you are thinking about it, that's for sure. Could you find it anyway?

Maybe, if you knew where to look. But where would that be? One level up? Unlikely. Because if it were there, the person who called you could have just as easily called the MINMAX command on the array itself. Why didn't he? Maybe he didn't know where it was either. Are you going to look for the data array everywhere? Where *is* everywhere, anyway?

Anyway, if you think this is worth pursuing (I don't), then have a look at the SCOPE_VAR** routines. They are what you want to use to nose around in places you have no business being.

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: converting a string to an IDL command
Posted by [astroboy2k](#) on Mon, 08 Sep 2008 19:43:00 GMT
[View Forum Message](#) <> [Reply to Message](#)

Thanks, Mike and David.

I do believe scope_var is just what I'm looking for. I already have a routine which returns line numbers within various layers of code, so I suppose I could come up with a function that would tell me the line number within each layer of code, the variable name at that level, and then the min and max (or whatever). Perverse as that is, that would be a big help in alot of the work I'm doing these days....

Mark

Subject: Re: converting a string to an IDL command
Posted by [David Fanning](#) on Mon, 08 Sep 2008 19:46:04 GMT
[View Forum Message](#) <> [Reply to Message](#)

Mark writes:

> I do believe scope_var is just what I'm looking for. I already have a
> routine which returns line numbers within various layers of code, so I
> suppose I could come up with a function that would tell me the line
> number within each layer of code, the variable name at that level, and
> then the min and max (or whatever). Perverse as that is, that would be
> a big help in alot of the work I'm doing these days....

Remind me not to get involved in any projects using IDL
code you have written. I have enough of my own problems. :-)

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: converting a string to an IDL command
Posted by [astroboy2k](#) on Mon, 08 Sep 2008 19:53:25 GMT
[View Forum Message](#) <> [Reply to Message](#)

On Sep 8, 3:46 pm, David Fanning <n...@dfanning.com> wrote:
> Mark writes:
>> I do believe scope_var is just what I'm looking for. I already have a
>> routine which returns line numbers within various layers of code, so I
>> suppose I could come up with a function that would tell me the line
>> number within each layer of code, the variable name at that level, and
>> then the min and max (or whatever). Perverse as that is, that would be
>> a big help in alot of the work I'm doing these days....
>
> Remind me not to get involved in any projects using IDL
> code you have written. I have enough of my own problems. :-)
>
> Cheers,
>
> David
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming:<http://www.dfanning.com/>
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

But David,

Everything I know about IDL I learned from you!

Seriously.

Mark ;)

Subject: Re: converting a string to an IDL command
Posted by [Michael Galloy](#) on Mon, 08 Sep 2008 19:54:47 GMT
[View Forum Message](#) <> [Reply to Message](#)

On Sep 8, 1:43 pm, Mark <astrobo...@gmail.com> wrote:
> I do believe scope_var is just what I'm looking for. I already have a
> routine which returns line numbers within various layers of code, so I

> suppose I could come up with a function that would tell me the line
> number within each layer of code, the variable name at that level, and
> then the min and max (or whatever). Perverse as that is, that would be
> a big help in alot of the work I'm doing these days....

I echo David sentiment that you shouldn't go too far down this road.
The routines I sent were meant as sort of a specialized HELP
replacement for interactive use. I would advise against using them in
code that you keep around.

Mike

--

www.michaelgalloy.com
Tech-X Corporation
Software Developer II

Subject: Re: converting a string to an IDL command
Posted by [David Fanning](#) on Mon, 08 Sep 2008 19:57:37 GMT
[View Forum Message](#) <> [Reply to Message](#)

Mark writes:

> Everything I know about IDL I learned from you!

Oh, oh. Guess I'll retire again. I've done enough damage. ;-)

Cheers,

David

--

David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: converting a string to an IDL command
Posted by [astroboy2k](#) on Mon, 08 Sep 2008 20:46:20 GMT
[View Forum Message](#) <> [Reply to Message](#)

On Sep 8, 3:57 pm, David Fanning <n...@dfanning.com> wrote:

> Mark writes:

>> Everything I know about IDL I learned from you!

>

> Oh, oh. Guess I'll retire again. I've done enough damage. ;-)

>

> Cheers,
>
> David

Seriously, David, I'm not a bad programmer, thanks in **large** part to you. This stuff is just to help me in telling where the numbers went bad in code that other people wrote, as Mike puts it, a glorified help command.

The very very best of luck in the future. The group here won't be the same without your unselfish help and humor.

Mark
